ADEQ Arizona Department of Environmental Quality
Janice K. Brewer, Governor
Henry R. Darwin, Director

DRAFT PERMIT

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Quality Division
1110 West Washington Street • Phoenix, AZ 85007 • Phone: (602) 771-2338

GENERAL AIR QUALITY CONTROL PERMIT for SOIL VAPOR EXTRACTION UNITS (SVEU)

(As required by Title 49, Chapter 3, Article 2, Section 49-426, Arizona Revised Statutes)

This air quality control permit does not relieve applicant of responsibility for meeting all air pollution regulations

THIS GENERAL PERMIT ISSUED SUBJECT TO THE FOLLOWING

Conditions contained in Attachments "A", "B", "C", and "D"

ADEQ GENERAL PERMIT NUMBER **102** PERMIT CLASS **II** EXPIRATION DATE _____

PERMIT ISSUED THIS _____ DAY OF _____,

Eric C. Massey, Director, Air Quality Division

SIGNATURE TITLE

GENERAL AIR QUALITY CONTROL PERMIT
FOR
SOIL VAPOR EXTRACTION UNITS

TABLE OF CONTENTS

GENERAL AIR QUALITY CONTROL PERMIT
FOR
SOIL VAPOR EXTRACTION UNITS

ATTACHMENT "A": GENERAL PROVISIONS

I. GENERAL PERMIT EXPIRATION AND RENEWAL

[A.R.S. § 49-426.F, A.A.C.R18-2-306.A.1, -505]

A. This General Permit is valid for a period of five years from the date of issuance. The Director of ADEQ (Director) shall review and may renew this General Permit every five years from its date of issuance. All Permittee's Authorizations to Operate (ATOs) shall coincide with the term of this General Permit, regardless of when the individual authorization began during this five year period, except that the Director may require a Permittee authorized to operate under this General Permit to apply for and obtain an individual permit at any time, if the source is not in compliance with the terms and conditions of this General Permit.

B. At the time that the public notice is required, pursuant to issuance of the proposed General Permit renewal, the Director shall notify in writing to all the Permittees who have been granted, or who have applications pending for, ATOs under this General Permit. The written notice shall describe the source's duty to reapply and may include requests for information required under the proposed General Permit.

II. COMPLIANCE WITH PERMIT CONDITIONS

A. The Permittee shall comply with all Conditions of this General Permit including all applicable requirements of Arizona air quality statutes and the air quality rules. Any permit noncompliance is grounds for enforcement action, for ATO termination or revocation, or for denial of a renewal application. In addition, non-compliance with any federally enforceable requirements constitutes a violation of the Clean Air Act.

[A.A.C. R18-2-306.A.8.a]

B. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

[A.A.C. R18-2-306.A.8.b]

III. GENERAL PERMIT REOPENINGS, REVOCATION AND REISSUANCE, OR TEMINATION FOR CAUSE

A. The Director may reopen and reissue, or terminate this General Permit at any time if:

1. The Director has determined that the emissions from the sources in the facility class cause or contribute to ambient air quality standards violations which are not adequately addressed by the requirements in this General Permit, or

[A.A.C. R18-2-510.A.1]

2. The Director has determined that the terms and conditions of this General Permit no longer meet the requirements of A.R.S. §49-426 and 427.

[A.A.C. R18-510.A.2]

3. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

[A.A.C. R18-2-321.A.1.c]

4. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.

[A.A.C. R18-2-321.A.1.d]

B. The Director may require a source authorized to operate under this General Permit to apply for and obtain an individual permit at any time if:

[A.A.C. R18-2-510.C]

1. The source is not in compliance with the terms and conditions of this General Permit;

2. The Director has determined that the emissions from the source or facility class are significant contributors to ambient air quality standard violations, which are not adequately addressed by the requirements in this General Permit.

3. The Director has information, which indicates that the effects on human health and the environment from the sources covered under this General Permit are unacceptable;

4. The Director has reasonable cause to believe that the ATO was obtained by fraud or misrepresentation; or

5. The person applying for an ATO failed to disclose a material fact required by the permit application or the regulations applicable to the ATO of which the applicant had or should have had knowledge at the time the application was submitted.

C. If the Director revokes a source's authority to operate under this General Permit, the Director shall notify the Permittee by certified mail, return receipt requested. The notice shall include a statement detailing the grounds for the revocation of authority and a statement that the Permittee is entitled to a hearing. A source previously authorized to operate under this General Permit may operate under the terms of this General Permit until the earlier of the date it submits a complete application for an individual permit, at which time it may operate under that application, or 180 days after receipt of the notice of revocation of authority to operate under this General Permit.

[A.A.C. R18-2-510.D]

IV. POSTING OF GENERAL PERMIT

[A.A.C. R18-2-315]

A. Any person who has been granted coverage under this General Permit shall post such General Permit or a certificate of General Permit coverage at the location where the equipment is installed in such a manner as to be clearly visible and accessible.

B. Equipment Labels

1. All portable equipment covered by this General Permit that has been issued an ATO shall have either an ADEQ certified label which will include the current permit number and ATO number, and the serial or other equipment number, or be clearly marked with one of the following:

   a. The current permit number and ATO number,

   b. A serial number or other equipment number that is also listed in the ATO.

2. All equipment covered by this General Permit but not issued an ATO shall be clearly marked with one of the following:

   a. The current permit number,

   b. A serial number or other equipment number that is also listed in the permit application.

C. A copy of the complete General Permit and associated ATOs shall be kept on the site.

V. FEE PAYMENT

[A.A.C. R18-2- 511]

The Permittee shall pay fees to the Director pursuant to A.R.S. §49-426(E) and A.A.C. R18-2-511.

VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE

A. The Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emissions information for the previous calendar year.

[A.A.C. R18-2-327.A]

B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.B.

[A.A.C. R18-2-327.B]

VII. COMPLIANCE CERTIFICATION

A. Permittee shall submit to the Director a compliance certification once each year, which describes the compliance status of the source with respect to each General Permit condition and the methods used for determining the compliance status. The Permittee shall list on the compliance certification all items of equipment issued ATO(s), on site at the time of annual certification. This certification shall be submitted by September 30th and shall cover the period from September 1 of the previous year to August 31 of the current year. In addition, this certification shall include a description of any permit deviation.

[A.A.C. R18-2-309.2.a and -309.2.d]

The compliance certification shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification;

[A.A.C. R18-2-309.2.c.i]

2. Identification of the method or other means used by the Permittee for determining the compliance status with each term and condition during the certification period.

[A.A.C. R18-2-309.2.c.ii]

3. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the methods or means designated in Condition VII.A.2 above. The certifications shall identify each deviation and take it into account for consideration in the compliance certification;

[A.A.C. R18-2-309.2.c.iii]

4. All instances of deviations from permit requirements reported pursuant to Condition XI.B of this attachment;

[A.A.C. R18-2-306.A.5.a]

5. Other facts the Director may require to determine the compliance status of the source.

[A.A.C. R18-2-309.2.c.iv]

B. A progress report on all outstanding compliance schedules shall be submitted every six months beginning with six months after permit issuance for all sources required to have a schedule of compliance to remedy a violation.

[A.A.C. R18-2-309.5.d]

VIII. CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS

[A.A.C. R18-2-309.3]

Any document required to be submitted by this General Permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this part shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

IX. INSPECTION AND ENTRY

[A.A.C. R18-2-309.4]

Upon presentation of credentials and other documents as may be required by law, Permittee shall allow the Department or an authorized representative (including an authorized contractor acting as a representative of the Department), to perform the following:

A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of this General Permit;

B. Have access to and copy, at reasonable times, any records that must be kept under conditions of this General Permit;

C. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this General Permit;

D. Sample or monitor, at reasonable times, substances or parameters at any location for the purpose of assuring compliance with this General Permit or other applicable requirements; and

E. Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

[A.A.C. R18-2-304(C)]

If the sources which have been issued ATOs become subject to a standard promulgated by the Administrator pursuant to Section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, reapply for coverage under the General Permit demonstrating how the sources will comply with the standard.

XI. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

A. Excess Emissions Reporting

1. Excess Emissions shall be reported as follows:

   a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:

   [A.A.C. R18-2-310.01.A]

      i. Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from Condition XI.1.b below;

      ii. Detailed written notification by submission of an excess emissions report within 72 hours of the notification pursuant to Condition XI.1.a.i above.

   b. The report shall contain the following information:

   [A.A.C. R18-2-310.01.B]

      i. Identity of each stack or other emission point where the excess emissions occurred;]

      ii. Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;

      iii. Date, time and duration, or expected duration, of the excess

emissions;

iv. Identity of the equipment from which the excess emissions emanated;

v. Nature and cause of such emissions;

vi. If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions; and

vii. Steps taken to limit the excess emissions. If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures.

2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period, or changes in the nature of the emissions as originally reported, shall require additional notification pursuant to Condition XI.A.1 above.

[A.A.C. R18-2-310.01.C]

B. Permit Deviations Reporting

[A.A.C. R18-2-306.A.5.b]

The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to an emergency or within two working days of the time when the owner or operator first learned of the occurrence of a deviation from a permit requirement.

C. Emergency Provision

[A.A.C. R18-2-306.E]

1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if Condition XI.C.3 below is met.

3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An emergency occurred and that the Permittee can identify the cause(s) of the emergency;

   b. The permitted facility was being properly operated at the time;

   c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

   d. The Permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. Compliance Schedule

[ARS § 49-426(I)(5)]

For any excess emission or permit deviation that cannot be corrected within 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated.

E. Affirmative Defenses for Excess Emissions due to Malfunctions, Startup, and Shutdown

1. Applicability

[A.A.C. R18-2-310.A]

This condition establishes affirmative defenses for certain emissions in excess of an emission standard or limitation and applies to all emission standards or limitations except for standards or limitations:

   a. Promulgated pursuant to Sections 111 or 112 of the Act;

   b. Promulgated pursuant to Titles IV or VI of the Clean Air Act;

   c. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. EPA;

   d. Contained in A.A.C. R18-2-715(F); or

   e. Included in a permit to meet the requirements of A.A.C. R18-2-406.A.5.

2. Affirmative Defense for Malfunctions

[A.A.C. R18-2-310.B]

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. When emissions in excess of an applicable emission limitation are due to a malfunction, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of Condition XI.A and has demonstrated all of the following:

a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the Permittee;

b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

c. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;

d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;

h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;

i. All emissions monitoring systems were kept in operation if at all practicable; and

j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records.

3. Affirmative Defense for Startup and Shutdown.

[A.A.C. R18-2-310.C]

a. Except as provided in Condition XI.E.3.b below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation are due to startup and shutdown, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of Condition XI.A and has demonstrated all of the following:

i. The excess emissions could not have been prevented through careful and prudent planning and design;

ii. If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;

iii. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

iv. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

v. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

vi. During the period of excess emissions there were no exceedance of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;

vii. All emissions monitoring systems were kept in operation if at all practicable; and

viii. Contemporaneous records documented the Permittee's actions in response to the excess emissions.

b. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to Condition XI.E.2 above.

4. Affirmative Defense for Malfunctions during Scheduled Maintenance

If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to Condition

XI.E.2 above.

[A.A.C. R18-2-310.D]

5. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under Condition XI.E.2 or XI.E.3 above, the Permittee shall demonstrate, through submission of the data and information required by Conditions XI.E and XI.A, that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of the excess emissions.

[A.A.C. R18-2-310.E]

XII. RECORD KEEPING REQUIREMENTS

A. Monitoring Records

[A.A.C. R18-2-306.A.4.a]

The Permittee shall keep records of all required monitoring information including, but not limited to, the following;

1. The date, place as defined in the permit, and time of sampling or measurements;
2. The date(s) analyses were performed;
3. The name of the company or entity that performed the analyses;
4. A description of the analytical techniques or methods used;
5. The results of such analyses; and
6. The operating conditions existing at the time of sampling or measurement.

B. The Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

[A.A.C. R18-2-306.A.4.b]

C. All required records shall be maintained either in an unchangeable electronic format or in a handwritten logbook utilizing indelible ink.

XIII. REPORTING REQUIREMENTS

[A.A.C. R18-2-306.A.5]

The Permittee shall submit the following reports:

A. Compliance certifications in accordance with Section VII of Attachment "A".

B. Excess emissions, permit deviations, and emergency reports in accordance with Section XI of Attachment "A".

C. Performance test results in accordance with Condition XVI.G of Attachment "A".

D. Reports required by any condition in other Attachments.

XIV. DUTY TO PROVIDE INFORMATION

A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revoking the General Permit coverage, or to determine compliance with this General Permit. Upon request, the Permittee shall also furnish to the Director copies of records that the Permittee is required to keep under the General Permit. For information claimed confidential, the Permittee shall furnish an additional copy of such records directly to the Director along with a claim of confidentiality.

[A.A.C. R18-2-306.A.8.e]

B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in a General Permit coverage application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

[A.A.C. R18-2-304.G]

XV. FACILITY CHANGE ALLOWED WITHOUT OBTAINING AN ATO OR INDIVIDUAL PERMIT

[A.A.C. R18-2-317.02]

A. Except for a physical change or change in the method of operation at a Class II source subject to logging or notice requirements in Conditions XV.B and XV.C below, a change at a Class II source shall not be subject to notice or logging requirements under this Section.

B. The following changes may be made if the source keeps on site records of the changes according to Appendix 3 of the Arizona Administrative Code:

1. Implementing an alternative operating scenario, including raw material changes;

2. Changing process equipment (as long as the change does not require a new ATO), operating procedures, or making any other physical change if the permit requires the change to be logged;

3. Engaging in any new insignificant activity listed in A.A.C. R18-2-101.57.a through A.A.C. R18-2-101.57.i but not listed in the permit;

4. Replacing an item of air pollution control equipment listed in the permit with an identical (same model, different serial number) item. The Director may require verification of efficiency of the new equipment by performance tests; and

5. A change that results in a decrease in actual emissions if the source wants to claim credit for the decrease in determining whether the source has a net emissions increase for any purpose. The logged information shall include a description of the change that will produce the decrease in actual emissions. A decrease that has not been logged is creditable only if the decrease is quantifiable, enforceable, and otherwise qualifies as a creditable decrease.

C. The following changes may be made if the source provides written notice to the Department in advance of the change as provided below:

1. If allowed under the General Permit, replacing an item of air pollution control equipment listed in the permit with one that is not identical but that is substantially similar and has the same or better pollutant removal efficiency: 7 days. The Director may require verification of efficiency of the new equipment by performance tests;

2. If allowed under the General Permit, replacing an item of air pollution control equipment listed in the permit with one that is not substantially similar but that has the same or better efficiency: 30 days. The Director may require verification of efficiency of the new equipment by performance tests; and

3. A change that would trigger an applicable requirement that already exists in the permit: 30 days unless otherwise required by the applicable requirement.

D. For each change under Condition XV.C above, the written notice shall be by certified mail or hand delivery and shall be received by the Director the minimum amount of time in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided with less than required notice, but must be provided as far in advance of the change, or if advance notification is not practicable, as soon after the change as possible. The written notice shall include:

1. When the proposed change will occur;

2. A description of the change;

3. Any change in emissions of regulated air pollutants; and

4. Any permit term or condition that is no longer applicable as a result of the change.

E. The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section, other than implementation of an alternate operating scenario under Condition XV.B.1.

F. If a source change is described under both Conditions XV.B and XV.C above, the source shall comply with Condition XV.C above.

G. A copy of all logs required under Condition XV.B shall be filed with the Director within 30 days after each anniversary of the date the Permittee obtained initial coverage under the General Permit. If no changes were made at the source requiring logging, a statement to that effect shall be filed instead.

H. Logging Requirements

A.A.C. R18-2-317.02.B and Appendix 3]

1. Each log entry required by a change under Condition XV.B shall include the following information:

a. A description of the change, including:

i. A description of any process change.

ii. A description of any equipment change, which does not require a new or revised ATO(s), including both old and new equipment descriptions, model numbers and serial numbers, or any other unique equipment number.

iii. A description of any process material change.

b. The date and time that the change occurred.

c. The provision of Condition XV.B that authorizes the change to be made with logging.

d. The date the entry was made and the first and last name of the person making the entry.

2. Logs shall be kept for 5 years from the date created. Logging shall be performed in indelible ink in a bound logbook with sequentially numbered pages, or in any other form, including electronic format, approved by the Director.

XVI. TESTING REQUIREMENTS

[A.A.C. R18-2-312]

A. The Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director.

B. Operational Conditions During Performance Testing

Tests shall be conducted during operation at the maximum possible capacity of each unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during periods of start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.

C. Tests shall be conducted and data reduced in accordance with the test methods and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312.B.

D. Test Plan

At least 14 calendar days prior to performing a test, the Permittee shall submit a test plan to the Director in accordance with A.A.C. R18-2-312.B and the Arizona Testing Manual. This test plan must include the following:

1. Test duration;

2. Test location(s);

3. Test method(s); and

4. Source operation and other parameters that may affect the test result.

E. Stack Sampling Facilities

The Permittee shall provide or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;

2. Safe sampling platform(s);

3. Safe access to sampling platform(s); and

4. Utilities for sampling and testing equipment.

F. Interpretation of Final Results

Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs is required to be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control, compliance may, upon the Director's approval, be determined using the arithmetic mean of the results of the other two runs. If the Director or the Director's designee is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes: forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation, which demonstrates good cause, must be submitted.

G. Report of Final Results

A written report of the results of all performance tests shall be submitted to the Director within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

XVII. PROPERTY RIGHTS

[A.A.C. R18-2-306.A.8.d]

This General Permit does not convey any property rights of any sort, or any exclusive privilege.

XVIII. SEVERABILITY CLAUSE

[A.A.C. R18-2-306.A.7]

The provisions of this General Permit are severable. In the event of a challenge to any portion of this General Permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force.

XIX. PERMIT SHIELD

[A.A.C. R18-2-325 and -508]

As of the date an ATO for a source is granted, compliance with the conditions of this General Permit shall be deemed compliance with all applicable requirements in effect on the date of General Permit issuance, provided that such applicable requirements are included and expressly identified in this permit. The permit shield shall not apply to any changes made pursuant to Sections XV of this Attachment.

XX. ACCIDENTAL RELEASE PROGRAM

[40 CFR 68]

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the time line specified in 40 CFR Part 68.

XXI. APPLICABILITY OF NSPS GENERAL PROVISIONS

[40 CFR 60]

For all equipment subject to a New Source Performance Standard, the Permittee shall comply with all applicable requirements contained in Subpart A of Title 40, Chapter 60 of the Code of Federal Regulations.

XXII. APPLICABILITY OF NESHAP GENERAL PROVISIONS

[40 CFR 63]

For all equipment subject to National Emissions Standards for Hazardous Air Pollutants, the Permittee shall comply with all applicable requirements contained in Subpart A of Title 40, Chapter 63 of the Code of Federal Regulations.

GENERAL AIR QUALITY CONTROL PERMIT
FOR
SOIL VAPOR EXTRACTION UNITS

ATTACHMENT "B": SPECIFIC CONDITIONS

I. RELATIONSHIP OF PERMIT TO APPLICABLE STATE IMPLEMENTATION PLAN

[ARS §49-404.C and -426]

This permit is issued pursuant to the provisions of Arizona Revised Statutes (ARS) and constitutes an Installation Permit for the purpose of the applicable State Implementation Plan.

II. FACILITY WIDE LIMITATIONS

A. Operating Limitations

1. For the purposes of this Permit, the Soil Vapor Extraction Unit (SVEU) shall be defined as both the vapor extraction device and associated control device (thermal oxidizer, catalytic oxidizer, or carbon adsorption).

[A.A.C. R18-2-306.A.2]

2. The Permittee shall display the name, address, and phone number of a current contact person at the site of the SVEU in a manner that is clearly visible and accessible.

[A.A.C. R18-2-306.A.2]

3. The Permittee shall operate and maintain the equipment identified in the Authorization to Operate (ATO) in accordance with manufacturer's specifications.

[A.A.C. R18-2-306.A.2]

4. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the Permittee thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.

[A.A.C. R18-2-730.G]

5. The Permittee shall not emit gaseous or odorous material from equipment, operations or premises under their control in such quantities or concentrations as to cause air pollution.

[A.A.C. R18-2-730.D]

6. The stack height for the SVEU shall not be less than 13 feet from ground level.

[A.A.C. R18-2-306.A.2]

7. The Permittee shall not directly discharge Volatile Organic Compounds (VOCs) into the atmosphere at any time without passing through the operating air pollution control device identified in the ATO.

[A.A.C. R18-2-306.A.2]

8. Upon project completion, all vapor extraction wells shall be secured with locking

caps to prevent access.

[A.A.C. R18-2-306.A.2]

9. The Permittee shall use only natural gas, propane, or electric power to operate the SVEU.

[A.A.C. R18-2-306.A.2]

10. *The Permittee shall not remediate any gas stream entering the SVEU control device with a VOC concentration greater than 20,000 ppmv or the manufacturer's specifications, whichever is less*.

[A.A.C. R18-2-306.01 and R18-2-331.A.3.a]
[Material Permit Condition is indicated by underline and italics]

11. For the purposes of this general permit the term halogenated compounds includes the following:

1,1,1,2-Tetrachloroethane	Bromoform	Glycerol trichlorohydrin
1,1,1-Trichloroethane	Bromomethane	Hexachlorobutadiene
1,1,2,2-Tetrachloroethane	Carbon tetrachloride	Hexachlorocyclopentadiene
1,1,2-Trichloroethane	Chlorodibromomethane	Hexachloroethane
1,1-Dichloroethane	Chloroethane	Methylene chloride
1,1-Dichloroethylene	Chloroform	Neoprene
1,2,2-Trifluoroethane (Freon 113)	Chloromethane	Pentachloroethane
1,2-Dichloroethane	Chloropropane	Perchloroethylene
1,2-Dichloropropane	Cis-1,2-dichloroethylene	Propylene dichloride
1,2-Trans-dichloroethylene	Cis-1,3-dichloropropene	Trichlorotrifluoroethane
1,3-cis-dichloro-1-propene	Dibromochloropropane	Monochlorobenzene
1,3-trans-dichloropropene	Dibromomethane	Tetrachloroethylene (Perchloroethylene) (PCE)
1-chloro-2-propene	Dichlorobromomethane	Trichloroethylene (TCE)
2-butylene dichloride	Dichloromethane	Vinyl chloride
Acetylene tetrachloride	Ethylene dibromide	Vinyl trichloride
Bromodichloromethane	Fluorotrichloromethane (Freon 11)	Vinylidene chloride

12. The Permittee shall not process Resources Conservation Recovery Act (RCRA) hazardous waste.

[A.A.C. R18-2-306.A.2]

B. Monitoring and Record Keeping Requirements

1. The Permittee shall maintain copies of the manufacturer's specifications for all of the equipment identified in the ATO on site.

[A.A.C. R18-2-306.A.4]

2. The Permittee shall retain records of all required monitoring data and support information for a minimum of five years from the date of generation in

accordance with Section XI of Attachment "A".

[A.A.C. R18-2-306.A.4]

3. The Permittee shall record monthly the total operating hours of the SVEU device on a 12-month rolling total.

[A.A.C. R18-2-306.A.4]

C. Reporting Requirements

Pursuant to Condition XIV of Attachment "A", the Permittee shall submit reports of all monitoring, record keeping, and testing activities required by Attachment "B" performed during the compliance term as specified in Condition VII of Attachment "A".

[A.A.C. R18-2-306.A.5]

D. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C. R18-2-730.D and R18-2-730.G.

[A.A.C. R18-2-325]

E. Until the Department makes available the "myDEQ" e-portal service to apply and obtain permits, the Permittee shall follow the requirements of A.A.C. R18-2-503. Upon notification from the Director of "myDEQ" availability, the Permittee shall conduct all permitting services and transactions through the e-portal.

[A.A.C. R18-2-306.A.2]

III. THERMAL/CATALYTIC OXIDIZER REQUIREMENTS

A. Operating Limitations

1. Thermal and Catalytic Oxidizer Operating Requirements

a. *The Permittee shall operate the thermal or catalytic oxidizer such that it shall achieve a minimum 90% VOC destruction efficiency*. This limit is not applicable when the inlet VOC concentration is less than or equal to 1000 ppmv.

[A.A.C. R18-2-306.01, -306.A.2, and R18-2-331.A.3.a]
[Material Permit Condition is indicated by underline and italics]

b. For the purposes of these permit conditions the process temperature shall be defined as the temperature of the catalytic or thermal oxidizer incineration section of the SVEU.

[A.A.C. R18-2-306.A.2]

c. The Permittee shall maintain the process temperature of the thermal oxidizer to be equal to or greater than 1400°F.

[A.A.C. R18-2-306.A.2]

d. The Permittee shall maintain the process temperature of the catalytic oxidizer to be equal to or greater than 600°F.

[A.A.C. R18-2-306.A.2]

e. The Permittee shall maintain the velocity of the gases exiting the SVEU

to be greater than or equal to 2.3 meters per second (7.5 feet per second).
[A.A.C. R18-2-306.A.2]

f. *The Permittee shall not remediate any gas stream at the inlet of an SVEU device using catalytic or thermal oxidation with a mass flowrate of halogenated compounds greater than 0.052 grams/second*.
[A.A.C. R18-2-306.A.2 and R18-2-331.A.3.a]
[Material Permit Condition is indicated by underline and italics]

(1) The Permittee shall show compliance with the above limit by using Equation 1 below:

[1]Equation 1:

$$C_c \times F < 20{,}000\ ppmv\left(\frac{Ft^3}{Min}\right)$$

Where:
Cc = Sum of Concentrations of All Halogenated Compounds, ppmv
F = Flowrate, SCFM

2. Monitoring Requirements

a. *The Permittee shall install* and maintain *a temperature recording device with an accuracy of ±5 degrees Fahrenheit (°F) shall be installed and maintained to measure and continuously record the process temperature of the thermal or catalytic oxidizer*.
[A.A.C. R18-2-306.A.2 and R18-2-331.A.3.c]
[Material Permit Condition is indicated by underline and italics]

b. At the request of the Director, the Permittee shall measure flow at the stack of the thermal or catalytic oxidizer to obtain the total actual flow rate of gases exiting the unit.
[A.A.C. R18-2-306.A.4]

B. Particulate Matter and Opacity

1. Emission Standards

a. The Permittee shall not discharge particulate matter into the atmosphere in any one hour from the thermal or catalytic oxidizer in total quantities in excess of the amount calculated by the following equation:

$E = 4.10P^{0.67}$

where:

E = the maximum allowable particulate emissions rate in pounds-mass

[1] Derivation of Equation 1 is provided in the Technical Support Document to this Permit

per hour

P = the process weight rate in tons-mass per hour

[A.A.C. R18-2-730.A.1.a]

b. The opacity of any plume or effluent shall not be greater than 20 percent.

[A.A.C. R 18-2-702.B.1]

c. If the presence of uncombined water is the only reason for an exceedance of the opacity limit above, the exceedance shall not constitute a violation.

[A.A.C. R18-2-702.C]

2. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-730.A.1.a, 702.B.1, and 702.C.

[A.A.C. R18-2-325]

C. Volatile Organic Compounds

1. Emission Standards

a. *The Permittee shall limit the emissions of VOCs exiting the SVEU to less than 75 tons per year on a 12-month rolling total.*

[A.A.C. R18-2-306.01, and R18-2-331.A.3.a]
[Material Permit Condition is indicated by underline and italics]

b. Benzene

(1) The Permittee shall limit the emissions of benzene exiting the SVEU to less than 0.55 pounds per hour.

(2) The Permittee shall limit the emissions of benzene exiting the SVEU to less than 67 pounds per year, on a 12 month rolling total.

[A.A.C. R18-2-306.A.2]

2. Monitoring Requirements

a. At each location at which the SVEU is operated, the Permittee shall take a representative grab sample of the inlet vapor stream to the SVEU device, as well as the outlet vapor stream exiting the SVEU upon startup at each new location, and then once every two weeks for the first six weeks, then monthly for the following six months, and then quarterly thereafter.

[A.A.C. R18-2-306.A.3]

b. The Permittee shall determine from the representative grab samples taken in accordance with Condition III.C.2.a above, the concentration of VOCs and halogenated compounds at the inlet of the SVEU, the concentration of the VOCs exiting the SVEU, and the concentration of benzene exiting the SVEU. The Permittee shall analyze the samples for halogenated compounds and benzene using EPA Reference Method

8260B or EPA Method TO-15 AZ List, and for Gasoline Range Organics using EPA Reference Method 8015 or EPA Method TO-15 AZ List, or equivalent methods approved by the Director.

[A.A.C. R18-2-306.A.3]

c. Prior to initial start-up or upon moving to a new site, the Permittee shall test for halogenated compounds. The analysis shall be conducted in accordance with EPA Reference Method 8260B, EPA Method TO-15 AZ List, or equivalent method as approved by Director.

[A.A.C. R18-2-306.A.3]

3. Recordkeeping Requirements

a. The Permittee shall calculate and record a 12-month rolling total of benzene emissions and a 12-month rolling total of VOC emissions at the end of each month. Appendix "A" explains how to complete this calculation. Emissions shall be calculated using the representative gas samples exiting the SVEU in accordance with the following:

(1) The first sampling results shall be used to calculate emissions until the second sampling date;

(2) The second sampling results shall be used to calculate emissions that occur after the second sampling date until the third sampling date; and

(3) The Permittee shall continue the methodology in Condition III.C.3.a(1) and III.C.3.a(2) above until the SVEU changes location, at which time the sampling sequence starts over. Benzene and VOC emissions from the previous location must still be accounted for in the 12-month rolling total.

[A.A.C. R18-2-306.A.4]

b. The Permittee shall sum the concentration of all halogenated compounds in ppmv identified in the analysis required in Condition III.C.2.b above in order to determine compliance with the allowable inlet concentration in Condition III.A.1.f.

[A.A.C. R18-2-306.A.2]

c. The following information shall be recorded for each grab sample, in tabular format.

(1) Date of sampling, and type of air pollution control in use;

(2) Site elevation (ft Above Mean Sea Level - AMSL);

(3) The flowrate entering the SVEU control device in standard cubic feet per minute.

(4) The process temperature of the SVEU, (°F).

(5) The combined total concentration of all halogenated compounds

at the inlet of the SVEU control device (ppmv).

(6) The concentration of VOCs at the inlet of the SVEU control device (ppmv);

(7) The VOC destruction efficiency for the SVEU;

(8) The emission rate of benzene exiting the SVEU, (lb/hr);

[A.A.C. R18-2-306.A.4]

4. Reporting Requirements

a. A written report of the results of the sampling required by Condition III.C.2.a shall be submitted to the Director upon request.

[A.A.C. R18-2-306.A.5]

b. A written report of the results of all the grab samples performed during the compliance term specified in Section VII of Attachment "A" shall be submitted to the Director in accordance with the reporting requirements in Section XIV of Attachment "A".

[A.A.C. R18-2-306.A.5]

D. Nitrogen Oxides

1. Emission Standards

The Permittee shall not discharge nitrogen oxides into the atmosphere in a concentration greater than 500 parts per million.

[A.A.C. R18-2-730.A.3]

2. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-730.A.3.

[A.A.C. R18-2-325]

E. Sulfur Dioxide

1. Emission Standards

The Permittee shall not discharge sulfur dioxide into the atmosphere in a concentration greater than 600 parts per million.

[A.A.C. R18-2-730.A.2]

2. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-730.A.2

[A.A.C. R18-2-325]

IV. CARBON ADSORPTION REQUIREMENTS

A. Operating Limitations

1. Carbon Adsorption Operating Requirements

a. *If carbon adsorption is used, the Permittee shall maintain a minimum of 2 granulated activated carbon (GAC) canisters arranged in series*.

[A.A.C. R18-2-306.A.2 and R18-2-331.A.3.c]
[Material Permit Condition is indicated by underline and italics]

b. The Permittee shall use the carbon adsorption unit to remove VOCs from the gases entering the SVEU only when the inlet concentration is less than the manufacturer's recommended maximum VOC concentration for the GAC canisters.

[A.A.C. R18-2-306.A.2]

c. The Permittee shall not exceed the manufacturer's recommended flowrate to each canister.

[A.A.C. R18-2-306.A.2]

d. For the purposes of these permit conditions, breakthrough shall be defined as less than a 90 percent VOC removal efficiency.

[A.A.C. R18-2-306.A.2]

e. The Permittee shall replace the carbon canisters when the calculated breakthrough time for the first stage canister is reached. The monitoring required by Condition IV.C.2.a below, along with other relevant factors including the working capacity of the GAC canister shall be used to determine the time the system can operate before breakthrough occurs.

[A.A.C. R18-2-306.A.2]

f. The Permittee shall determine breakthrough by either testing or calculation. Whenever breakthrough is determined either by testing or calculation at the outlet of the first stage carbon adsorber, the soil vapor extraction and treatment system shall be immediately shut down, and the first stage adsorber removed from service. The SVEU shall not be restarted until the second stage adsorber has been relocated to the first stage adsorber position. Likewise, if there are more than 2 adsorbers, each adsorber shall be moved down one position (towards the SVEU unit), and the final stage adsorber shall be replaced with a new adsorber with fresh activated carbon.

[A.A.C. R18-2-306.A.2]

g. The Permittee shall store spent carbon removed from the system in closed containers prior to removal from the site.

[A.A.C. R18-2-306.A.2]

2. Monitoring Requirements

a. At the request of the Director, the Permittee shall measure flow at the stack of the carbon adsorption unit to obtain the total actual flow rate of gases exiting the unit.

[A.A.C. R18-2-306.A.4]

b. The Permittee shall maintain records of the serial number of each canister of activated carbon, the date each is installed, the position in the

series (first, second, or third stage position, etc…), and the date removed from service.

[A.A.C. R18-2-306.A.3]

B. Particulate Matter and Opacity

1. Emission Standards

a. The Permittee shall not discharge particulate matter into the atmosphere in any one hour from the SVEU in total quantities in excess of the amount calculated by the following equation:

$E = 4.10P^{0.67}$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour

P = the process weight rate in tons-mass per hour

[A.A.C. R18-2-730.A.1.a]

b. The opacity of any plume or effluent shall not be greater than 20 percent.

[A.A.C. R 18-2-702.B.1]

c. If the presence of uncombined water is the only reason for an exceedance of the opacity limit above, the exceedance shall not constitute a violation.

[A.A.C. R18-2-702.C]

2. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-730.A.1.a, 702.B.1, and 702.C.

[A.A.C. R18-2-325]

C. Volatile Organic Compounds

1. Emission Standards

a. *The Permittee shall limit the emissions of VOCs exiting the SVEU to less than 75 tons per year on a 12-month rolling total.*

[A.A.C. R18-2-306.01, and R18-2-331.A.3.a]
[Material Permit Condition is indicated by underline and italics]

b. Benzene

(1) The Permittee shall limit the emissions of benzene exiting the SVEU to less than 0.55 pounds per hour.

(2) The Permittee shall limit the emissions of benzene exiting the SVEU to less than 67 pounds per year, on a 12 month rolling total.

[A.A.C. R18-2-306.A.2]

2. Monitoring Requirements

a. At each location at which the SVEU is operated, the Permittee shall take a representative grab sample of the inlet vapor stream to the SVEU as well as the outlet vapor stream exiting the SVEU upon startup at each new location, and then once every two weeks for the first six weeks, then monthly for the following six months, and then quarterly thereafter.

[A.A.C. R18-2-306.A.3]

b. The Permittee shall determine from the representative grab samples taken in accordance with Condition IV.C.2.a above, the concentration of VOCs at the inlet of the SVEU, the concentration of the VOCs exiting the SVEU, and the concentration of benzene exiting the SVEU. The Permittee shall analyze the samples for benzene using EPA Reference Method 8260B or EPA Method TO-15 AZ List, and for Gasoline Range Organics using EPA Reference Method 8015 or EPA Method TO-15 AZ List, or equivalent methods approved by the Director.

[A.A.C. R18-2-306.A.3]

3. Recordkeeping Requirements

a. The Permittee shall calculate and record a 12-month rolling total of benzene emissions and a 12-month rolling total of VOC emissions at the end of each month. Appendix "A" explains how to complete this calculation. Emissions shall be calculated using the representative gas samples exiting the SVEU in accordance with the following:

(1) The first sampling results shall be used to calculate emissions until the second sampling date;

(2) The second sampling results shall be used to calculate emissions that occur after the second sampling date until the third sampling date;

(3) The Permittee shall continue the methodology in Conditions IV.C.3.a(1) and IV.C.3.a(2) above until the SVEU changes location, at which time the sampling sequence starts over. Benzene and VOC emissions from the previous location must still be accounted for in the 12-month rolling total.

[A.A.C. R18-2-306.A.4]

b. The following information shall be recorded for each grab sample, in tabular format

(1) Date of sampling, and type of air pollution control in use;

(2) Site elevation (ft Above Mean Sea Level - AMSL);

(3) The concentration of VOCs at the inlet of the SVEU control device (ppmv);

(4) The emission rate of VOCs exiting the SVEU (lb/hr);

(5) The VOC destruction efficiency for the SVEU;

(6) The emission rate of benzene exiting the SVEU, (lb/hr);

[A.A.C. R18-2-306.A.4]

4. Reporting Requirements

(1)

5.

a. A written report of the results of the sampling required by Condition IV.C.2.a shall be submitted to the Director upon request.

[A.A.C. R18-2-306.A.5]

b. A written report of the results of all the grab samples performed during the compliance term specified in Section VII of Attachment "A" shall be submitted to the Director in accordance with the reporting requirements in Section XIV of Attachment "A".

[A.A.C. R18-2-306.A.5]

V. CONDITIONS SPECIFIC TO PORTABLE SOURCES

A. Until the Department makes available the "myDEQ e-portal service, the Permittee shall follow the requirements of A.A.C. R18-2-503. Upon notification from the Director of "myDEQ" availability, the Permittee shall conduct all permitting services and transactions through the e-portal.

[A.A.C. R18-2-306.A.2]

B. Move Notice

[A.A.C. R18-2-513.G and -306.A.5]

A portable source granted coverage under a general permit may be transferred from one location to another provided that the Permittee of such equipment notifies the Director, and any control officer who has jurisdiction over the geographic area that includes the new location of the transfer prior to the transfer. The location change shall include the following:

1. A description of the permitted equipment to be transferred including permit number and as appropriate the Authorization-to-Operate number for each piece of equipment;

2. A description of the present location;

3. A description of the location to which the equipment is to be transferred, including the availability of all utilities, such as water and electricity, necessary for proper operation for all control equipment;

4. The date on which equipment is to be moved;

5. The date on which operation of the equipment will begin at the new location; and

6. A complete list of all equipment that will be located at the new location.

C. Portable Sources Operating Solely in One County

[A.A.C. R18-2-324.A and B]

A portable source that will operate for the duration of its permit solely in one county that has established a local air pollution control program pursuant to A.R.S. 49-479 shall obtain a permit from that county. A portable source with a county permit shall not operate in any other county until it receives a permit from the Arizona Department of Environmental Quality.

[A.A.C. R18-2-324.A and -324.B]

GENERAL AIR QUALITY CONTROL PERMIT
FOR
SOIL VAPOR EXTRACTION UNITS

ATTACHMENT "C": SPECIFIC CONDITIONS ADDITIONAL REQUIREMENTS FOR SOURCES OPERATING IN MARICOPA OR PIMA COUNTIES

I. REQUIREMENTS FOR SOURCES OPERATING IN MARICOPA COUNTY

The Permittee shall abide by all requirements of Attachment "B" and the following requirements while operating in Maricopa County: If more than one emission limit or emission standard is applicable to the same source, the more stringent standard or emission limit shall apply.

A. Facility Wide Limitations

1. Odor Limiting Standard

No person shall emit gaseous or odorous air contaminants for equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution.

[Maricopa County Rule 320 § 300]

2. Opacity Standard

No person shall discharge into ambient air from any single source of emission any air contaminants, other than uncombined water, in excess of 20 percent opacity for a period aggregating more than three minutes in any 60-minute period.

[Maricopa County Rule 300 § 301]

3. Organic Solvents and Other Organic Materials

No person shall store, discard, or dispose of VOC or VOC containing material in a way intended to cause or allow the evaporation of VOC to the atmosphere.

[Maricopa County Rule 330 § 306]

B. Thermal/Catalytic Oxidizer and Carbon Adsorption Requirements

1. Emission Limitations

a. Particulate Matter

(1) No person shall discharge, cause or allow the discharge of particulate matter emissions, caused by combustion of fuel, from any fuel burning operation in excess of amounts calculated by the equation presented below:

(a) For equipment having a heat input rating of 4,200 million btu/hr or less, the maximum allowable emissions (E) shall be determined by the following equation:

$$E=1.02Q^{0.769}$$

where:

E = The maximum allowable particulate emission rate in pounds-mass per hour, and

Q = The heat output in million BTU per hour (MMBtu/hr)

[Maricopa County SIP Rule 311 § 304]

b. Volatile Organic Compounds (VOCs)

[Maricopa County Rule 220 § 302.2]

(1) The Permittee shall limit the emissions of VOCs to less than 135 pounds per day.

(2) The Permittee shall limit the emissions of VOCs to less than 22.5 tons per year on a 12 month rolling total.

2. Record Keeping Requirements

The Permittee shall maintain a log detailing the daily VOC emissions emanating from the SVEU stack. The daily emissions shall be calculated on the same frequency as the testing specified in Conditions III.C.2.a or IV.C.2.a above of Attachment "B" using the most recent sampling data.

C. Permit Shield

Compliance with this Part shall be deemed compliance with Maricopa County Rules 320 § 300, 311 § 304, 300 § 301, and 330 § 306.

II. REQUIREMENTS FOR SOURCES OPERATING IN PIMA COUNTY

The Permittee shall abide by all requirements of Attachment "B" and the following requirements while operating in Pima County: If more than one emission limit or emission standard is applicable to the same source, the more stringent standard or emission limit shall apply.

A. Operating Limitations

[P.C.C. 17.16.010.C]

The Permittee of any stationary or portable source of air pollution which burns any material, except natural gas, shall keep records of the material used as fuel. The Permittee of any stationary or portable of air pollution which incinerates any material shall complete records of all materials incinerated.

B. Particulate Matter

The Permittee shall not discharge into the atmosphere in any one hour from any SVEU process source in total quantities in excess of the amount calculated by the following equation:

$E = 3.59Q^{0.62}$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

Q = the heat input in million Btu per hour.

[PCC 17.16.430.A.1.a]

C. Visibility Limiting Standard

[Pima County Applicable SIP Rule 343 and P.C.C. 17.16.050]

1. The Permittee shall not cause, suffer, allow or permit operations or activities likely to result in excessive amounts of airborne dust without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne.

2. Opacity of an emission from any non-point source shall not be greater than 40 percent measured in accordance with the Arizona Testing Manual, Reference Method 9.

3. The Permittee shall not cause or permit the airborne diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions became airborne.

    a. In actual practice, the airborne diffusion of visible emissions across property lines shall be prevented by appropriately controlling the emissions at the point of discharge, or ceasing entirely the activity or operation which is causing or contributing to the emissions.

    b. Condition II.C.3 above shall not apply when the naturally induced wind speed exceeds 25 miles per hour as estimated by a certified visible emission evaluator using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by a U.S. Weather Bureau Section or a U.S. Government military installation.

    c. The exception in Condition II.C.3.b above shall not apply to the demolition, destruction, transport, or pulverization of structures containing friable asbestos materials, and all dust producing activities associated with such sources shall be halted when the wind is causing or contributing visible emissions to cross beyond the property lines within which the emissions discharge.

    d. Any disregard of, neglect of, or inattention to other controls required herein, during any time when Condition II.C.3.b above is in effect, shall automatically waive the exception in Condition II.C.3.b, and such relaxation of controls shall be a violation.

4. Condition II.C above shall not apply to the generation of airborne particulate matter from undisturbed land.

D. Permit Shield

Compliance with Conditions of this Section shall be deemed compliance with P.C.C.

§§ 17.16.010.C, P.C.C. §§ 17.16.040, P.C.C. §§ 17.16.050 and SIP Rule 343.
[A.A.C. R18-2-325]

APPENDIX A: EXAMPLE CALCULATIONS GENERAL AIR QUALITY PERMIT FOR SOIL VAPOR EXTRACTION UNITS (SVEU)

The Permittee is required to calculate a rolling 12-month total of benzene and VOC emissions within 5 days of the end of each month.

Emissions shall be calculated using the representative gas samples exiting the SVEU, using the first sampling results to calculate emission until the second sampling date. Likewise, the second sampling results will be used to calculate the emissions until the third sampling date and so forth. The following example below details the required calculation:

Example 1: Calculate total Benzene emissions over a 14 month period
Assumptions:

- Initial Benzene sample prior to startup = 0.01 $\left({}^{lb}/_{hr}\right)$
- First Benzene sample after initial sample = 0.009 $\left({}^{lb}/_{hr}\right)$
- Second Benzene sample after initial sample = 0.007 $\left({}^{lb}/_{hr}\right)$
- Sample Period = 30 days for this example
- 24 hours per day operation
- Unit Conversion $\left({}^{minute}/_{hr \bullet feet^3}\right)$ = 1.56e-7 = 0.000000156

Step1: Convert ppmv to Pounds:

$$(1.56E-7)\times(\text{FlowRate})\times(\text{Concentration})\times(\text{MW})=\text{Emission Rate in Pounds per Hour}\left({}^{lb}/_{hr}\right)$$

Where: MW = molecular weight = 78.17 for Benzene and 100 for VOC

Flow Rate is in Units of $\left({}^{feet^3}/_{minute}\right)$

Step 2: Calculate Benzene emissions for first month

$$\text{Benzene Total Pounds (BTP) for first month}\,(BTP1)=\left(0.01\,{}^{lb}/_{hour}\right)\times(30\text{ days})\times\left(24\,{}^{hours}/_{day}\right)=7.2\text{ Pounds Benzene}$$

Step 3: Calculate total Benzene Emission after second month:

$$BTP2=\left(0.009\,{}^{lb}/_{hour}\right)\times(30\text{ days})\times\left(24\,{}^{hours}/_{day}\right)=6.48\text{ Pounds Benzene}$$

$$\text{Total Benzene Emissions After Two Months}(Total2)=BTP1+BTP2=7.2+6.48=13.68\text{ Pounds Benzene}$$

Step 4: Calculate total Benzene Emission after third month:

$$BTP3=\left(0.007\,{}^{lb}/_{hour}\right)\times(30\text{ days})\times\left(24\,{}^{hours}/_{day}\right)=5.04\text{ Pounds Benzene}$$

$$\text{Total Benzene Emissions After Three Months}(Total3)=BTP1+BTP2+BTP3=7.2+6.48+5.04=18.72\text{ Pounds Benzene}$$

Step 5: Continue calculating emission for months 4 through 14 following the steps above.

$$\text{Total Benzene After 12 Months}(Total12)=BTP1+BTP2+BTP3+BTP\ldots+BTP11+BTP12$$

$$\text{Total Benzene After 13 Months}(Total13)=BTP2+BTP3+BTP\ldots+BTP12+BTP13$$

$$\text{Total Benzene After 14 Months}(\text{Total14}) = \text{BTP3} + \text{BTP} \ldots + \text{BTP13} + \text{BTP14}$$

Once the initial 12 months is reached the Total Benzene **must not exceed** 67 Pounds per Year.